



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,404	03/26/2004	Yoshiyuki Kodama	9319S-000671	1281
27572	7590	10/03/2007	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			SITTA, GRANT	
		ART UNIT	PAPER NUMBER	
		2629		
		MAIL DATE	DELIVERY MODE	
		10/03/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/812,404	KODAMA, YOSHIYUKI
<b>Examiner</b>	<b>Art Unit</b>	
Grant D. Sitta	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 16 July 2007.  
 2a) This action is FINAL.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-21 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-21 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 26 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/26/2004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____ .                        |

DETAILED ACTION

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14,15,18 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Uchida et al. (2002/0097194) hereinafter Uchida.
3. In regards to claim 14, a display mode causing a display device having a reflective display ([0017]) disposed on a rear surface side (fig. 2 (20) fig 3 (20)) of a self-luminous transmissive display (fig. 1 (10) and fig. 3 (10)) to display display contents; causing the transmissive display to display color ([0047]) display data included in the display contents ([0047], “10 that is a full color active matrix display”); and causing the reflective display ([0017], “translucent reflective liquid crystal display”) to display monochromatic display data included in the display contents ([0047], “monochrome”) also, ([abstract and [0033]], “transflective or **reflective** liquid crystal display”).
4. Examiner also notes a transflective display includes both a reflective display element and a transmissive display element. Thus, Uchida teaches every element of Applicant's claimed invention.

Art Unit: 2629

5. In regards to claim 15 the transmissive display ("Organic EL device") is made to display color ([0047]) photographic data ([0010]) included in the display contents and the reflective display ([0017], "translucent reflective liquid crystal display") is made to display monochromatic photographic [0024] data and character data [0064] "(the primary display information), for example, the time..." included in the display contents ([0010 and 0016]).

6. In regards to claim 18, when a power-saving ("switch") mode is selected by a user "(switching means)", the reflective display is also made to display (switches between the display between the organic EL panel and the liquid crystal display"), in two colors, the color display data included in the display contents ([0086-0087], [0098]-[0099]).

7. In regards to claim 19, where the transmissive display ("Organic EL device" ([0047])) is being made to display the color display data ([0047], "10 that is a full color active matrix display"); included in the display contents passes a set amount of time ([0034], "predetermined time"), the state is automatically moved ([0034] "automatically switched") to a state where the reflective display is made to display [0034 and 0047], in two colors, the color display data [0034].

Art Unit: 2629

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 1-4 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antila et al (6,583,770) hereinafter Antila in view of Jacobson et al (6,445,489) hereinafter Jacobson.

11. In regards to claims 1 and 13, Antila teaches a first display (fig. 4b, (D1)) disposed on a display screen side of the display device (abstract, "display in a first direction");

a second display (Fig. 4b (D2)) disposed on a rear surface side of the display device; the first display including (abstract, "and a second displaying in a second, essentially opposite direction."):

a self-luminous layer (fig. 4b, (42 and 48) that self-emits desired color lights in response to a first applied voltage (col. 6, lines 40-70); and

Art Unit: 2629

a pair of transparent electrodes disposed so as to sandwich the self-luminous layer (col. 6, 40-70, "glass plates");

Antila fails to teach the second display including an electrophoresis layer that displays two colors in response to a second applied voltage.

However, Jacobson teaches combining an electrophoretic display including a light-emitting layer, a photoconductive layer, and an electrophoretic layer with the light-emitting layer maybe organic (Abstract). Jacobson further shows the black pigments for the optical barrier, which will produce two colors in response to a voltage (col. 8. 5-10 lines)

It would have been obvious to one skilled in the art to include the use of electrophoretic layering display as taught by Jacobson with the methodology of Antila in order to provide a switching means such that the display operates with reduced power consumptions and improved lifetime (col. 7, lines 53-67).

Examiner also notes, Jacobson further shows the black pigments for the optical barrier, which will produce two colors in response to a voltage (col. 8. 5-10 lines) and states "[t]he invention therefore provides for the combination of light-emitting, photoconductive, and electrophoretic materials in a display that is addressable using a multiplex addressing drive scheme. Such a combination permits construction of cheap, low-power, bistable, and fast-switching, yet high-resolution, displays." (Col. 11, lines 18-24).

Art Unit: 2629

12. In regards to claim 2, where the two color display is black and white. Jacobson teaches using black pigments as the optical barrier (Jacobson, col. 8. 5-10 lines). Examiner notes with black pigments as optical barriers either light will be allowed through or will be blocked thus producing the two colors black or white.

13. In regards to claim 3, wherein the self-luminous layer comprises an organic electroluminescese layer (Jacobson col. 1-2 lines 65-3).

14. In regards to claim 4, further comprising a control means for controlling the display states of the first display and second display (Antila col. 3 lines 45-55).

15. In regard to **claim 20**, Jacobson teaches wherein one of the transparent (fig. 1 (16)) electrodes is shared by the first display and the second display (col. 4, lines 29-35). Examiner notes both the electrophoretic and the light-emitting layer share the electrode.

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Antila in view of Suso et al (6,466,202) hereinafter Suso.

17. In regards to claims 5, a first display (Antila, fig. 4a (D1)) disposed on a display screen side of the display device; a second display (Antila, fig. 4a (D2)) disposed on a rear (Antila abstract "opposite direction"), surface side of the display device (D2);

Art Unit: 2629

the first display including:

a self-luminous layer (Antila fig. 4b, (42 and 48) that self-emits desired color lights in response to a first applied voltage(Antila col. 6, lines 40-70);; and

a pair of transparent electrodes disposed so as to sandwich the self-luminous layer;

the second display including (Antila col. 6, 40-70, "glass plates");:

a reflective display layer (Jacobson, col. 2, lines 5-10) that displays two colors in response to a second applied voltage(Jacobson col. 8. 5-10 lines); and  
Antila fails to teach a control means for controlling the display states of the first display and the second display wherein: One the first display displays in color and the second display displays monochromatic.

However, Suso teaches a control means (Suso, abstract "control means") to display color display (col. 2-3 lines 63-16, "multicolored") data included in display contents and causes the second display to display monochromatic display (Suso, col. 2-3 lines 63-16, "monochromatic") data included in the display contents (Suso, col. 4, lines 10-16).

It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to modify Antila to include the use of a color and mochromatic display as taught by Suso in order to reduce the power consumption as stated in Suso (col. 3, lines 1-15 of Suso). Examiner notes that a reduction in power consumption is a common theme among all three inventions.

In regards to claim 7, wherein the control means (Suso, col. 6-7, lines 56-5 "CPU") causes the first display (Suso, fig. 2a (11)) to display color photographic data (Suso, fig. 3a and 3b (11)) included in the display contents and causes the second display (Suso, fig. 2a (10)) to display monochromatic photographic data (Suso, fig. 2a (11), "image") and character data (Suso, fig. 2a (10) "Taro's Birthday") included in the display contents (Suso, col. 6 lines 21-40).

18. In regards to claim 8, wherein the control means Suso, (col. 6-7, lines 56-5 "CPU") causes the first display (Suso, fig. 2a and 2b (11)) to display the color display data included in the display contents and displays, in a dark color, a portion of the second display superposed (Suso, fig. 2a (11)) on a display region of the color display data (Suso, col. 6, lines 20-40). Examiner notes that the superposed images create the "dark color" as defined in the specification.

19. In regards to claim 9, wherein the control means (Suso, col. 6-7, lines 56-5 "CPU") causes the second display (Suso, fig. 2, (10) col. 6 lines 40-55) to display the character data (Suso, "Taro's birthday" included in the display contents and sets, to a light-emitting state, a portion of the first display (fig. 2 (11)) at least substantially superposed (Suso, "it is overlapped") on a bright color display region of the character data (Suso, (fig. 2, (10) col. 6 lines 40-55).

20. In regards to claim 10, further comprising mode selection means for enabling a user to select a power-saving mode, wherein, when the power-saving mode is selected, the control means (Suso, col. 6-7, lines 56-5 "CPU") causes the second display (Suso, fig. 2, (10) to also display, in two colors (Suso, "monochromatically displayed" col. 3, lines 1-16), the color display data included in the display contents (Suso, col. 3, lines 1-30 "accordingly information which can be monochromatically displayed is displayed on the see-through liquid crystal display"). Examiner notes it would have been obvious to one skilled in the art to have a mode to select between the modes of display disclosed by Suso. The power consumption on these display embodiments varies and, by choosing the embodiment that uses less power, the user is choosing a power-saving mode.

21. In regards to claim 11, wherein when the state where the first display (Suso, fig. 2a and 2b (11)) is displaying the color display data (Suso, "multi-colored" col. 3, lines 1-16) included in the display contents passes a set amount of time (anytime), the control means automatically moves to a state where the second display (fig. 2a, (10)) is allowed to display, in two colors, the color display data (col. 3, lines 1-30). Examiner notes that the second display according to Suso is transparent as a result the second display will be allowed to display the first display data. Examiner also notes since the first display is color displaying the image, the image will be in at least two colors.

22. Claims 6 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Antila and Jacobson as applied to claim 5 above, and further in view of Suso.

23. In regards to claims 6, wherein the control means (Suso, col. 6-7, lines 56-5 "CPU incorporated in the portable information communication terminal unit controls the reversal of the information of the indication in accordance with an operation of the opening or closing." inner casing 4 controls the display") causes the first display to (Suso, fig. 2a (11)) display color display (Suso, col. 5, lines 25-46) data included in display contents and causes the second display (fig. 2a (10) to display monochromatic display data included in the display contents (Suso, col. 3 lines 1-16).

24. In regards to **claim 21**, Antila and Suso discloses the limitations of 5, Antila and Suso differ from the claimed invention in that Antila and Suso do not disclose wherein one of the transparent electrodes is shared by the first display and the second display.

However, Jacobson teaches a system and method wherein one of the transparent electrodes (fig. 1 (16)) is shared by the first display and the second display. (col. 4, lines 29-35). Examiner notes both the electrophoretic and the light-emitting layer share the electrode

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Anitila and Suso to include the use of a shared electrode as taught

by Jacobson in order to provide a: "combination of light-emitting, photoconductive, and electrophoretic materials in a display that is addressable using a multiplex addressing drive scheme. Such a combination permits construction of cheap, low-power, bistable, and fast-switching, yet high-resolution, displays." as stated in (Col. 11, lines 18-24 Jacobson).

25. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suso, Antila and Jacobson as applied to claim 5 above, and further in view of Matthies et al (6,498,592) hereinafter Matthies.

26. In regards to claim 12, Suso as modified by Antila discloses the limitations of 5. Suso as modified by Antila differs from the claimed invention in that Suso and Antila do not disclose a means for detecting the amount of light incident to the display screen. Wherein the control means controls the brightness of the first display in response to the incidental light.

However, Matthies teaches a system and method for a light-adjusting circuit (Matthies col. 10, lines 54-70).

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Suso, Antila and Jacobson to include the use of light sensor as taught by Matthies in order to control the brightness of the first display in order to "compensate for pixel brightness..." as stated in Matthies (col. 10, lines 55-70).

27. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uchida in view of Suso.

28. In regards to claim 16, Uchida teaches a method of display wherein the transmissive display ("Organic EL device" ([0047])) is made to display the color display data ([0047], "10 that is a full color active matrix display"); included in the display contents

However Uchida fails to show a portion of the reflective display superposed (Suso, fig.2a (11)) on a display region of the color display data is displayed in a dark color.

Suso shows the second display (Suso, fig. 2a and 2b (10)) superposed on a display region of the first display (Suso, fig. 2a and 2b (11)) data is displayed in a dark color. Examiner notes the superimposed displays create the "dark color" as defined in the specification "a dark color, a portion of the second display superposed on a display region of the color display data."

It would have been obvious to one of ordinary skill in the art, at the time of the invention, to modify Uchida to include the use of superimposing the first display on top of the second display as taught by Suso in order to reduce the power consumption as stated in (col. 3, lines 1-15 of Suso).

29. In regards to claim 17, wherein the reflective display [0017], (fig. 2 (20) fig 3 (20)) Uchida) is made to display the character data (Fig. 1c "Mt James Stewart" Suso)

Art Unit: 2629

35. In regards to dependent claim 12, the rejection is maintained for the same reasons as stated in independent claim 5 above.

36. In regards to dependent claims 16 and 17, the rejection is maintained for the reason stated in independent claim 14 above.

***Conclusion***

37. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Grant D. Sitta whose telephone number is 571-270-1542. The examiner can normally be reached on M-F 9-6.

included in the display contents and a portion of the transmissive display (fig. 2b (10) Suso) and (11) at least substantially superposed (fig. 2a and 2b Suso) on a bright color display (fig. 2b (11) Suso) region of the character data (fig. 2b "Msg from Taro" Suso) is set to a light-emitting state (col. 3, lines 1-15).

### ***Response to Arguments***

30. Applicant's arguments filed 7/16/2007 have been fully considered but they are not persuasive.
31. In response to applicant's argument that "Uchida teaches in paragraph [0047] an organic EL device 10 that is a full color active matrix display, and a transflective liquid crystal display" and does not teach a reflective display. Examiner disagrees with this argument. Uchida states that the LCD can be either transflective or reflective. See ([abstract and [0033]], "transflective or **reflective** liquid crystal display").
32. In response to applicant's argument that "[t]here is no teaching or suggestion of a device having a first display including a self-luminous layer and a second display including an electrophoresis layer", However, Jacobson is the one which is cited to teach the first display including a self-luminous (see figs. 1,3,4 (10)) and a second display including an electrophoresis layer (see figs. 1,3,4 (14))

The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the

claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

33. In response to applicant's argument that "There is no teaching or suggestion that the display device of Jacobson may be viewed from a front side and a rear side such that both the light-emitting layer and the electrophoresis layer are capable of emitting desired color lights in response to a first applied voltage (i.e., in a manner similar to the claimed electro-luminescence layer) and displaying two colors in response to a second applied voltage (i.e., in a manner similar to the claimed electrophoresis layer). "

However, Examiner notes such teachings were never claimed. Applicant is advised to see MPEP 2111.01 II:

"Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment."  
*Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004)(discussing recent cases

34. In response to applicant's arguments in claim 5 and 6, the rejection is maintained and applicant is advised to see the reasons in claim 1 above.

Art Unit: 2629

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amare Mengistu can be reached on 571-270-7674. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Grant D. Sitta

September 17, 2007



AMARE MENGISTU  
SUPERVISORY PATENT EXAMINER